

**CLAIMS**

I claim:

- 1           1.       A method for controlling fans comprising:  
2           arranging a combination of thermal sensors;  
3           coupling the combination of thermal sensors to a thermal data channel of a  
4       controller; and  
5           controlling cooling devices in accordance with the thermal data channel.
- 1           2.       The method of claim 1, wherein arranging comprises placing the  
2       thermal sensors in proximity to electrical devices.
- 1           3.       The method of claim 2, wherein the electrical devices are processors.
- 1           4.       The method of claim 1, wherein the thermal sensors are coupled in  
2       parallel.
- 1           5.       The method of claim 4, wherein the thermal sensors are constructed to  
2       respond uniformly to changes in temperature.
- 1           6.       The method of claim 1, wherein the thermal sensors are diodes.
- 1           7.       The method of claim 1, wherein the thermal sensors are transistors.
- 1           8.       The method of claim 1, further comprising installing the controller and  
2       the combination of thermal sensors in an electronic enclosure.
- 1           9.       An electronic assembly comprising:  
2           means for housing a plurality of active integrated circuit devices; and  
3           means for controlling cooling devices proximal to select integrated circuit  
4       devices, wherein said means for controlling cooling devices is coupled to a  
5       combination of a first thermal sensing means and a second thermal sensing means.

1           10.     The electronic assembly of claim 9, wherein said means for controlling  
2     cooling devices uses a single thermal data channel to sense thermal information  
3     provided by the first and second thermal sensing means.

1           11.     The electronic assembly of claim 9, wherein said means for controlling  
2     cooling devices drives a first cooling device located proximal to a first processor and  
3     a second cooling device located proximal to a second processor.

1           12.     The electronic assembly of claim 11, wherein said means for  
2     controlling cooling devices drives the first and second fans in response to the warmest  
3     of the first processor and the second processor.

1           13.     The electronic assembly of claim 9, wherein the combination of the  
2     first thermal sensing means and the second thermal sensing means is arranged in  
3     parallel.

1           14.     An apparatus comprising:  
2             a first device fan located proximal to a first select electrical device;  
3             a second device fan located proximal to a second select electrical device;  
4             a combination of a first thermal sensor and a second thermal sensor, wherein  
5     the first thermal sensor is located proximal to the first select electrical device and the  
6     second thermal sensor is located proximal to the second select electrical device; and  
7             a fan controller having a first thermal data channel coupled to the combination  
8     of the first and second thermal sensors.

1           15.     The apparatus of claim 14, wherein the fan controller senses the  
2     warmer of the first select electrical device and the second select electrical device and  
3     drives both the first device fan and the second device fan in accordance with a  
4     thermal operating profile for the first and second select electrical devices.

1           16.     The apparatus of claim 15, wherein the first select electrical device  
2     and the second select electrical device comprise integrated circuits.

1           17.    The apparatus of claim 14, wherein the first and second thermal  
2   sensors respond uniformly to changes in temperature.

1           18.    The apparatus of claim 14, wherein the first and second thermal  
2   sensors are diodes.

1           19.    The apparatus of claim 14, wherein the first and second thermal  
2   sensors are transistors.

1           20.    The apparatus of claim 14, wherein the first device fan and the second  
2   device fan are substantially similar.

1           21.    The apparatus of claim 14, further comprising:  
2           an enclosure having an enclosure fan and a third thermal sensor coupled to a  
3   second thermal data channel of the fan controller.

1           22.    The apparatus of claim 21, wherein the fan controller senses  
2   temperature using the third thermal sensor and the second thermal data channel and  
3   drives the enclosure fan in accordance with a thermal operating profile for the  
4   enclosure.